Responses to Comments in Letter 9 from Douglas MacAdams and Christopher Smith, Abbotsford Chamber of Commerce

Note: The responses listed below are numbered to correspond to the numbers shown in the right-hand margin of the preceding comment letter.

1. As discussed in Letter 3, Response to Comment 2, detailed air quality modeling indicated that the proposed project would comply with all applicable United States ambient air quality standards and Canadian air quality objectives for all criteria pollutants. In addition, a technical review of the air quality impact assessment prepared by technical staff from the British Columbia Ministry of the Environment, Land and Parks (MELP) concluded that the proposed project would not cause exceedances of the most stringent Canadian air quality objectives (Volume 1, Appendix K, page vi).

   The recently promulgated (June 2000) Canada Wide Standard for PM2.5 is 30 micrograms per cubic meter (µg/m3) using the 24-hour average, annual 98th percentile averaged over three years. Analyses conducted by MELP air quality technical staff and based on Chilliwack, British Columbia, data show that since 1995 the PM2.5 Canada Wide Standard has not exceeded 18.2 µg/m3. Assuming that PM10 emissions from the proposed facility are 100 percent PM2.5, and given a maximum predicted impact of 7.4 µg/m3, a conservative estimate of the total PM2.5 concentration would be 26 µg/m3, below the proposed Canada Wide Standard. The Canadian MELP concluded that emissions from the proposed facility would not exceed the Canada Wide Standard if existing ambient concentrations of PM2.5 remain similar to historical levels. (Volume 1, Appendix K, pages 22 and 23).

2. Table 3.1-4 of the Draft EIS acknowledges that the proposed project would result in significant emissions of a number of criteria pollutants. Air quality modeling indicates that maximum deposition due to the project is expected to occur on Sumas Mountain and is less than 1.3 percent of the average deposition experienced during the past in the Lower Fraser Valley. This percentage then drops to 0.4 percent within several miles of Sumas Mountain (Volume 1, Appendix K, page vii).

   With respect to the total pollutants in the Lower Fraser Valley airshed (including Washington State sources), NOx, SO2, VOC, and PM10 concentrations attributable to the proposed project would account for 0.33, 0.03, 0.29, 0.15, and 1.48 percent, respectively, of annual emissions in the airshed (Volume 1, Appendix K, page 3).

3. As noted in Letter 3, Response to Comment 2, the incremental impact of air emissions from the proposed facility on overall air quality would not exceed applicable regulatory requirements and would have a relatively small incremental impact on total emissions in the airshed. The percent contribution of individual contaminants to the entire airshed total ranges from 0.03 percent to approximately 1.48 percent as discussed above in Letter 9, Response to Comment 2.

4. The wildlife evaluation was based on habitat evaluations, records for sensitive species, and reconnaissance surveys. Complete surveys were not necessary to understand the impacts of the project. Conversion of habitat is an unavoidable impact of any construction project in a rural area. Listing of all species is not necessary to determine significant impacts on wildlife. Over 100 species of birds could be present, as well as numerous species of mammals and amphibians and a few reptile species. However, EIS evaluations are intended to focus on rare, threatened, or endangered species, per WAC 197-11-440(6), which defines what level of detail is appropriate for the affected environment of an EIS:

   "*Succinctly describe the principal features of the environment that would be affected, or created, by the alternatives including the proposal under consideration. Inventories of species should be avoided, although rare, threatened, or endangered species should be indicated."*

   The EIS does this and notes the key species that are present and would be affected.

5. The federal and state Clean Air Acts require that Best Available Control Technology (BACT) be applied to control significant pollutants from new or modified major sources. BACT is defined as an emissions limitation based on the maximum degree of reduction for each pollutant subject to regulation, emitted from any proposed major stationary source, on a case-by-case basis, taking into account cost-effectiveness, economic, energy, environmental, and other considerations (Exhibit 170.2, page 6). The BACT analysis prepared for the proposed project is consistent with the "top-down" BACT guidance required by the EPA (EPA 1990a) for BACT determinations. Contrary to the comment, economic considerations are not the prime factors in a BACT determination.

   The "top-down" BACT process considers the most stringent form of emissions reduction technology possible, then tries to establish that it is technically infeasible or not economically justifiable. If proven infeasible or unjustifiable, then the next less stringent level of reduction is considered. When an emission reduction technology cannot be defeated, then it is determined to be BACT. The ultimate decision on what constitutes BACT for any particular project is made by the permitting authorities, not the applicant.

   A "top-down" BACT analysis starts by identifying all "available" control options. Available control options are those pollution control technologies with a practical potential for application to the emissions unit and the regulated pollutant under evaluation. Air pollution control technologies include the application of production processes or available methods, systems, and techniques for control of the affected pollutant.

   In the second step of the BACT analysis, the technical feasibility of each control option identified is evaluated with respect to source-specific factors. A demonstration of technical infeasibility must show, based on physical, chemical, and engineering principles, that technical difficulties would preclude the successful use of the control option on the emissions unit under review. Technically infeasible control options are then eliminated from further consideration in the analysis.

In the third step, all remaining control alternatives not eliminated in the second step are ranked and then listed in order of overall control effectiveness for the pollutant under review, from most to least effective control alternative.

After the identification of available and technically feasible control technology options, additional impacts (energy, environmental, and economic) are considered to arrive at the final level of control for a specific project. In the event that the top-level control technology is shown to be inappropriate due to energy, environmental, or economic impacts, then the next most stringent alternative in the listing becomes the new control candidate and is similarly evaluated. The most effective control option not eliminated is proposed as BACT for the pollutant and emission unit under review.

The economic impact analysis involves assessing the costs associated with installation and operation of each BACT alternative. Examples of costs included are: (1) capital and interest charges, (2) engineering and installation costs, (3) operating and maintenance costs, (4) energy costs, (5) waste disposal costs, and (6) lost revenue due to equipment downtime. For the proposed project, the BACT analysis resulted in equivalent or lower emission limits than those determined to be BACT for similar and recent permitting actions in Washington State and Canada. (Application for Site Certification, Volume 2, Appendix B-3, page 1)

6. We agree with the commentor that emissions associated with natural gas are less than those associated with fuel oil.

7. A Draft Fact Sheet for Prevention of Significant Deterioration has been prepared to accompany a Draft Notice of Construction/Prevention of Significant Deterioration Permit for the proposed facility (Exhibit 170.2). The Fact Sheet summarizes the results of the BACT analysis and establishes control technologies and emission limits for pollutants subject to regulatory control. Emission limits would be specified in operating permits for the proposed facility and subject to monitoring requirements.

8. A detailed air quality impact analysis has been prepared for the proposed project. The assessment included input from a large number of regulators and scientists in both Canada and the United States. The overall conclusion of the analysis was that the proposed facility would not exceed either federal ambient air quality standards or Canadian air quality objectives. Please see Letter 3, Response to Comment 2 for a discussion of air quality impacts associated with the proposed facility.

9. Emission limits and monitoring requirements for the proposed facility would be specified in the facility's operating permit. Based on similar types of facilities and permits, it is likely that there would be continuous emission monitors to measure NOx, CO, O2, and CO2. In addition, source testing would also likely cover other pollutants such as SO2, ammonia, particulate matter, and VOCs. If emissions from the proposed facility were found to be in violation of the permit limit, the facility operator could be subject to enforcement action by EFSEC and the EPA, and corrective measures would be imposed to bring the facility back into compliance.

10. See Letter 3, Response to Comment 4 for discussion of transmission line health effects and General Response B for discussion of potential socioeconomic effects of the transmission line in Canada.

11. It is not anticipated that visibility and tourism would be significantly affected by operation of the plant since it would result in a small, incremental increase in emissions and would not exceed regulatory air quality standards. For more discussion of visibility, see Letter 49, Response to Comment 7. Respiratory health is discussed in Letter 3, Response to Comment 1.